

**U.S. Environmental Protection Agency
Pollution Report**

SDMS Document



113275

Subject: Pollution Report (Initial) #1
Cornell-Dubilier Site
Site ID #: GZ
Location of Site: 333 Hamilton Boulevard
Middlesex County, South Plainfield, New Jersey

Latitude: 40.5775

Longitude: -74.4136

To:	D. Harkay ERRD-RAB	D. Karlen, 2ORC-NYCSFB
	J. Rotola, ERRD-RAB	D. Mellott, 2ORC-NYCSFB
	B. Grealish, ERRD-RAB	T. Grier, 5202G
	P. Mennino, EPA-NYRB	R. Byrnes, 2OIG
	S. Flanagan, 2ORC-NYCSFB	J. Mater, NJDEP
	G. Zachos, ACSM/O	C. Kelley, RST
	B. Doctors, ERRD-RAB	

From: James Kearns, On-Scene Coordinator

Date: October 21, 2008

Reporting Period: 07:00 Hrs 10/13/08 to 17:30 Hrs 10/20/08

1.0 Introduction

1.1 Background

The Cornell-Dubilier Electronics, Inc. ("CDE") Site is located at 333 Hamilton Boulevard, South Plainfield, Middlesex County, New Jersey. The former CDE facility consists of approximately 26 acres that formerly contained 18 buildings. The fenced 26-acre facility is bounded on the northeast by the Bound Brook and the former Lehigh Valley Railroad, Perth Amboy Branch (presently Conrail); on the southeast by the Bound Brook and a property used by the South Plainfield Department of Public Works; on the southwest, across Spicer Avenue, by single-family residential properties; on the northwest, across Hamilton Boulevard, by mixed residential and commercial properties; and to the south by a wetlands area.

Prior to 1936, Spicer Manufacturing Corp., a predecessor to Dana Corporation, owned and operated the facility. Spicer Manufacturing Corp. ceased operations in South Plainfield in 1929 and, beginning in 1936, leased the property to CDE. CDE operated at the facility from 1936 to 1962, manufacturing electronic components including, in particular, capacitors. Polychlorinated biphenyls ("PCBs") and chlorinated organic solvents were used in the manufacturing process, and the company apparently disposed of PCB-contaminated materials and other hazardous substances directly on the facility soils. CDE's activities evidently led to widespread chemical contamination at the facility, as well as migration of contaminants to areas nearby the facility. PCBs have been detected in the

groundwater, soils and in building interiors at the industrial park, at adjacent residential, commercial, and municipal properties, and in the surface water and sediments of the Bound Brook. High levels of volatile organic compounds (VOCs) have been found in the facility soils and in groundwater. Since CDE's departure from the facility in 1962, it has been operated as a rental property, with over 100 commercial and industrial companies operating at the facility as tenants. Some of these tenants may have contributed to some Site contamination, but the PCB and VOC contamination appears to be primarily attributable to CDE's operation.

Capacitors, many containing PCBs, were dumped in large numbers at the site, and capacitor debris has been found in the Bound Brook since the site was first identified. Recent erosion of a portion of the stream bank near the industrial park may have led to a spike in the amount of capacitor debris in the Brook.

Periodic inspections of the Bound Brook adjacent to the former CDE facility have identified an occasional capacitor. These capacitors are believed to have been displaced due to erosion. In December 2007, EPA collected additional sediment samples in the Bound Brook adjacent to the former CDE facility. Results indicate that PCB concentrations have increased in some areas of the Bound Brook. EPA's observations of occasional capacitors on the banks of the Brook and review of recent sediment analytical data warrants further action by EPA.

The removal action planned to begin on October 14, 2008 is an interim action that will armor the banks of the Bound Brook in the area of the three culverts and along the wetlands that border the historical CDE disposal area. The objective is to eliminate direct contact with PCB-contaminated debris and prevent its migration from the banks along the perimeter of the former CDE facility property. The following actions are proposed to stabilize the banks to prevent the release of PCB-contaminated debris due to erosion:

- Vegetation will be cleared from the banks of the Bound Brook in the area of the three culverts and on the southern bank of the facility property along the edge of the wetlands area. Approximately 15,000 to 20,000 ft² of area will be cleared of vegetation.
- Geotextile fabric will be installed over the soil in the cleared area to prevent erosion. The barrier will be installed on the banks of the Bound Brook in Reach 1, from near the railway siding and three culverts to approximately 140 feet downstream of the culverts in the tongue area and north bank and for approximately 500 feet upstream of the culverts along the southern bank of the former CDE facility property that borders the wetlands area.
- Rip-rap will be installed over the geotextile fabric to armor the banks of the Bound Brook and to secure the geotextile fabric ("revetment installation").
- A dust monitoring/control program will be initiated during all site activities. All cleared vegetation will be chipped on-site and spread on the temporary roadways.

Background Information

Site No.:	GZ
Cerclis No:	NJD981557879
Response Authority:	CERCLA
NPL Status:	Site was listed on the NPL July 1998
Record of Decision:	ROD for Operational Unit #1 ("OU-1")- issued on September 30, 2003. OU-1 addresses residential, commercial, and properties in the vicinity of the site. ROD for OU-2- issued municipal in September 2004. OU-2 addresses soils with PCB concentrations above 500 ppm and contaminated soils that exceed New Jersey's Impact to Groundwater Soil Cleanup Criteria for contaminants other than PCBs

Start Date:	October 14, 2008
Demobilization Date:	
Completion Date:	N/A
Operable Unit:	OU-4
Type of Removal Action:	RV- Removal
Lead:	EPA Lead

1.1.1 Incident Category

CERCLA Incident Category: Other- Interim Action to stabilize the Banks of the Brook along the east boundary of the site and along the edge of the wetlands located in the southern portion of the site.

1.1.2 Site Description

1.1.2.1 Site Location

The site coordinates are 40.5775 Latitude and -74.4136 Longitude. The former CDE facility is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey. It occupies approximately 26 acres in an area of mixed industrial, commercial and residential uses, and is bordered by commercial businesses and residences to the south, west, and northwest. Wetlands and an unnamed tributary to the Bound Brook border the former CDE facility to the southeast and east. Conrail railroad tracks pass alongside the eastern edge of the Site and crisscross the unnamed tributary just north of the former CDE facility. Other industries and commercial businesses are present to the northeast and east of the former CDE facility on the opposite side of the Conrail tracks. An estimated 540 persons reside within 0.25 miles of the former CDE facility, with the nearest residential homes being located on Spicer Avenue and on the opposite side of Hamilton Boulevard, less than 200 feet from the former CDE facility. The total population estimated to live within one mile of the Site is 8,700 persons. A site map is included as Appendix 1.

The unnamed tributary flows into the Bound Brook approximately 0.75 miles downstream of the former CDE facility. The Bound Brook flows for 1.5 miles before emptying into New Market Pond. Surface water flow from New Market Pond travels approximately 8.5 miles before discharging into the Raritan River. The dam on the western edge of New Market Pond is reportedly impassible to most fish. Spring Lake is located upstream from the Site and is associated with Cedar Brook. Both of these water bodies support secondary contact recreation including boating and fishing. All of the above-mentioned water bodies are designated by the State of New Jersey for the maintenance, migration, and propagation of the natural and established biota. These water bodies are utilized as freshwater fisheries. A fish consumption advisory has been posted for the area between the former CDE facility and New Market Pond. Wetlands that border the former CDE facility to the southeast diminish significantly as the Bound Brook heads downstream towards the northwest. The width of the stream in the vicinity of the former CDE facility varies from ten to 20 feet, with a varying depth during normal conditions, of one to four feet. Ground water is a significant source of drinking water within a four-mile radius of the Site. The majority of people within this radius are served by drinking water from either the Middlesex Water Company or the Elizabethtown Water Company, both of which utilize supply wells within four miles of the Site.

1.1.2.2 Description of Threat

PCBs are the most prevalent contaminants found at the Site. PCBs were initially released and disposed of as a result of manufacturing activities at the former CDE facility, and have migrated and been spread further since CDE ceased operations. Surface and subsurface soil sample analytical results indicated the presence of PCB compounds in

almost all of the samples collected. Four individual Aroclors (-1242, -1248, -1254, and -1260) were detected at the former CDE facility.

PCBs are a group of 209 different chemicals which share a common structure but vary in the number of attached chlorine atoms. The International Agency for Research on Cancer and EPA classify PCBs as a probable human carcinogen. The National Toxicology Program has concluded that PCBs are reasonably likely to cause cancer in humans. The National Institute for Occupational Safety and Health has determined that PCBs are a potential occupational carcinogen. Studies of PCBs in humans have found increased rates of melanomas, liver cancer, gall bladder cancer, biliary tract cancer, gastrointestinal tract cancer, and brain cancer, and have found that PCBs may be linked to breast cancer. PCBs are known to cause a variety of types of cancer in rats, mice, and other study animals.

Once PCBs enter a person's (or animal's) body, they tend to be absorbed into fat tissue and remain there. Unlike water-soluble chemicals, they are not excreted, so the body accumulates PCBs over years. This means that PCBs also accumulate via the food chain: a small fish may absorb PCBs in water or by eating plankton, and these PCBs are stored in its body fat. When a larger fish eats the small fish, it also eats and absorbs all the PCBs that have built up in the small fish. In this way, larger fish and animals can build up a highly concentrated store of PCBs. Some types of PCBs may degrade into nontoxic form while they are stored in the body, but this process can take many years.

People exposed directly to high levels of PCBs, either via the skin, by consumption, or in the air, have experienced irritation of the nose and lungs, skin irritations such as severe acne (chloracne) and rashes, and eye problems. Women exposed to PCBs before or during pregnancy can give birth to children with significant neurological and motor control problems, including lowered IQ and poor short-term memory.

PCBs with only a few chlorine atoms can mimic the body's natural hormones, especially estrogen. Women who consumed PCB-contaminated fish from Lake Ontario were found to have shortened menstrual cycles. PCBs are also thought to play a role in reduced sperm counts, altered sex organs, premature puberty, and changed sex ratios of children. More highly-chlorinated PCBs (with more chlorine atoms) act like dioxins in altering the metabolism of sex steroids in the body, changing the normal levels of estrogens and testosterone. PCBs tend to change in the body and in the environment from more highly-chlorinated to lower-chlorinated forms, increasing their estrogenic effects.

Because of the high concentrations of PCBs present in the soils in the southeastern portion of the former CDE facility, a limited number of surface and subsurface soil samples underwent PCB congener analysis. There are 209 congeners of PCBs. Individual congeners can have a toxicity similar to dioxin and, if present in sufficient concentrations, can pose a risk higher than the PCB congeners that lack the chemical properties of dioxin. This analysis revealed 3,3',4,4'-tetrachlorobiphenyl, a dioxin-like congener, at a maximum concentration of 2,200 parts per million ("ppm").

As reported in the September 2004 EPA ROD for OU2, test pit excavations unearthed capacitors that appeared corroded and/or partially burned. In addition, during excavation of test pits, white and blue crystalline powder, electrical components, and other materials were unearthed.

Due to the presence of charred debris in the test pits and the fact that burning PCBs can result in the generation of dioxins and dibenzofurans, a highly toxic group of contaminants, a limited set of soil samples were subjected to dioxin and furan analysis. Although analyzed in only a few surface and subsurface soil samples during the OU2 RI/FS, dioxins and furans were detected. These hazardous substances are acutely and chronically toxic, and carcinogenic. The potential health effects from some of these compounds are skin disorders such as chloracne; liver problems; impairment of the immune system, endocrine system, and reproductive functions; effects on the developing nervous system and other developmental events; and development of certain types of cancers.

The mechanisms by which these hazardous substances could be released include potential airborne release and

potential migration of contamination in the surface water and groundwater. Numerous events could trigger releases. The primary concerns include destabilization of the banks of the Bound Brook, bank erosion, migration of soils, migration of debris (such as PCB-contaminated wood blocks and PCB-contaminated paper film used in capacitors) as a result of flooding in the wetlands area, and seepage of PCB-contaminated perched groundwater from the overburden into the Bound Brook.

2.0 Current Activities

2.1 Operations

2.1.1 Narrative

Following receipt of authorization for the performance of this time-critical removal action at the Cornell-Dubilier Site for the installation of revetment, ERRS mobilized to site on October 13, 2008.

2.1.2 Response Actions To Date

On September 26, 2008 Earth Tech ("ET") was forwarded the Task Order for the Cornell-Dubilier Stream/Wetlands Stabilization Activities and began 3-bidding materials and equipment for the work.

On Friday October 10, 2008, a draft Health and Safety plan was completed by ERRS and reviewed by EPA.

Equipment and materials for the performance of site activities were received on site by ET on Monday October 13, 2008. Trailer, portable bathrooms, geotextile material and an excavator delivered to Site. ERRS personnel inspected and setup Site equipment. RM Galioto met with an electrician to discuss requirements.

Stabilization of the banks of the site bordering the wetlands began on Tuesday October 14, 2008. OSC, ERRS and RST 2 collected equipment from EPA Edison. A wheeled loader and a photocopier was delivered to Site. ERRS started grubbing in south-western corner of Site adjacent to Spicer Street perimeter fence. Approximately 5,000 ft² was cleared. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. Weather was fine, 70's°F, humidity 83%, wind 3mph, SW.

2.1.4 Progress Metrics

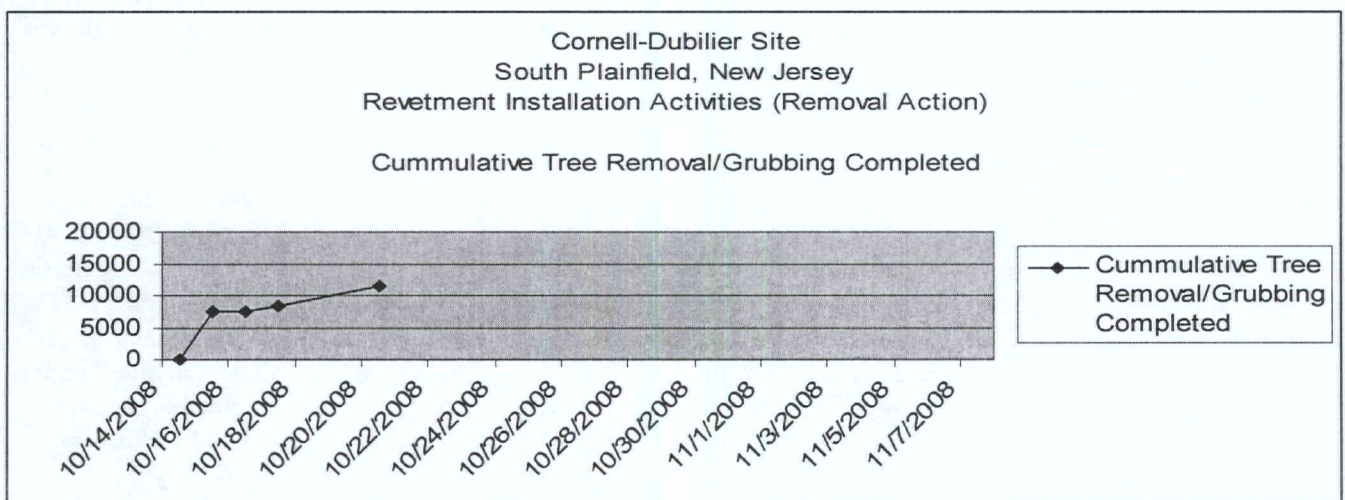
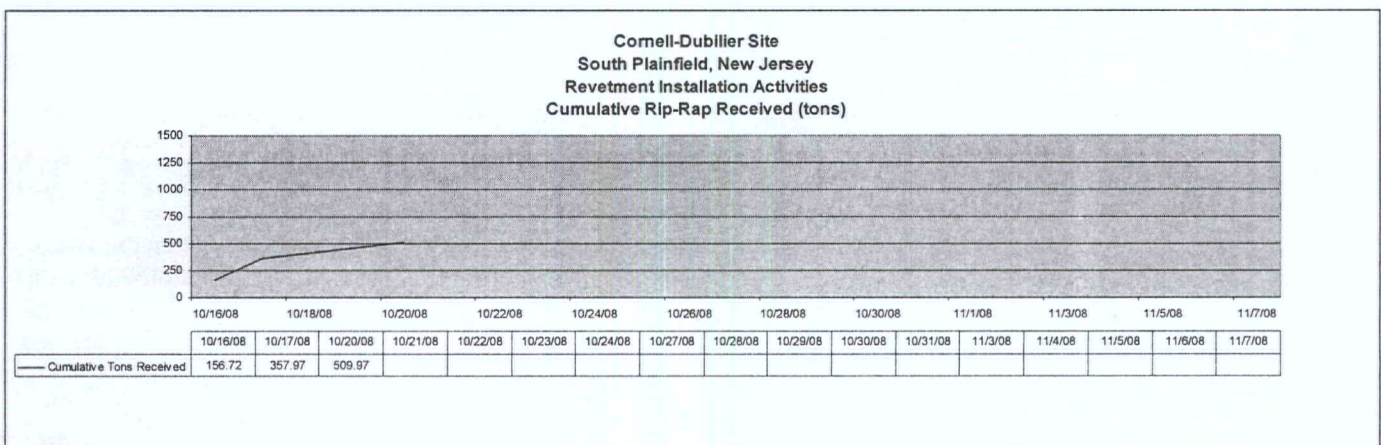
10-15-08- ERRS installed the stone staging area. ERRS continued grubbing in South-western corner of Site adjacent to Spicer Street perimeter fence. Approximately 7,200 ft² has been cleared. ERRS installed geotextile material in South-western corner of Site. Approximately 750 ft² of geotextile material was installed. Verizon connected telephone service to Site trailers. OSC obtained replacement DataRAM from EPA, Edison. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. RST 2 measured total area cleared by ERRS. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. No particulate exceedances were observed. Weather was fine, 70's°F, average humidity 77%, wind 1mph, (calm).

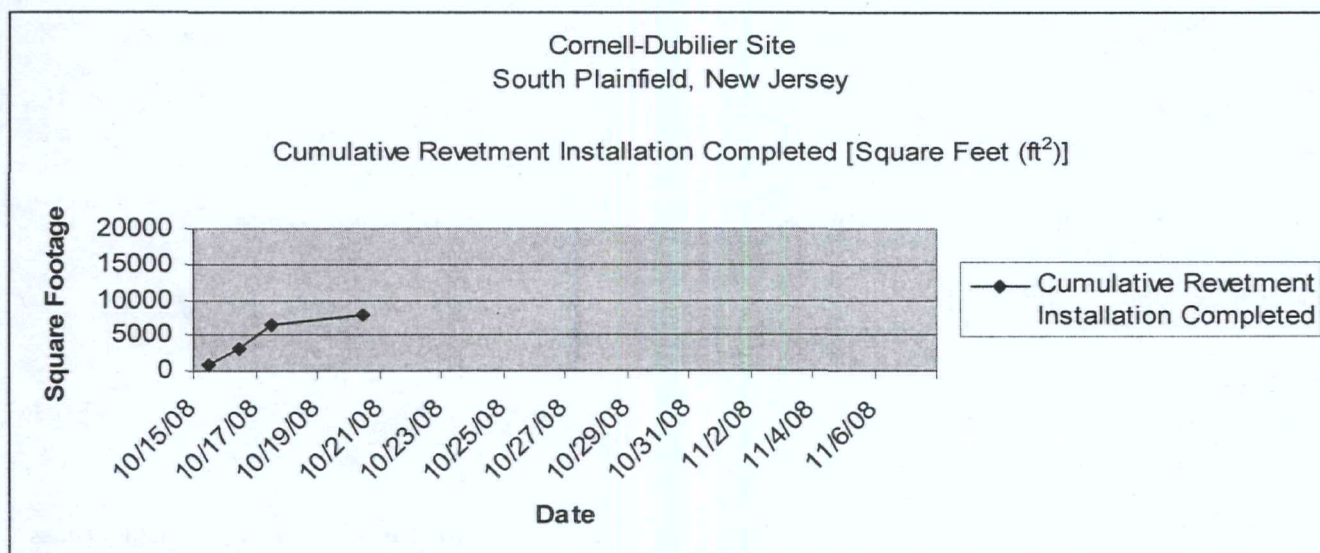
10-16-08- Six truck-loads of 6" D50 rip-rap were delivered to Site and staged. ERRS transferred staged stone to

prepared area in South-west corner of Site. ERRS installed stone over geotextile in South-west corner of Site. Approximately 3,000 ft² of geotextile and rip-rap has been installed. Electrician connected power to Site trailers. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. Particulate levels were elevated due to haze and high humidity. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. RST 2 generated particulate monitoring summary. No particulate exceedances were observed. Weather was cloudy, maximum temp. 79°F, average humidity 69%, wind 7mph, S-N.

10-17-08- Diesel fuel tank delivered to Site. Rock box delivered to Site. [8] truck-loads of 6" D50 rip-rap delivered. ERRS continued installing geotextile material and rip-rap in wetland area. At the end of the day a total of ~6,480 ft² of armoring (clearing, geotextile placement and rip-rap coverage) was complete. To date ~360 tons of 6" D-50 rip rap has been delivered to the site. RST 2 generated particulate monitoring summary. No particulate exceedances were observed.

10/20/08- ERRS continued grubbing along the stream bank area to the south of the double culvert. Approximately 150 linear feet of bank was cleared of trees/brush and geotextile was placed over 50 feet of bank and covered with rip-rap. Additional geotextile was ordered. Six loads of rip-rap were delivered to site. To date a total of approximately 512 tons of rip-rap has been delivered to site. RST generated particulate monitoring summary. No particulate exceedances were observed.





2.2 Planning

2.2.1 Anticipated activities for next reporting period

2.2.1.1 Planned Response Activities

Since 2007 periodic inspections have been conducted along the Bound Brook near the former CDE facility. Capacitors, capacitor parts, and PCB-contaminated wood blocks discovered during these inspections have been collected and secured in drums at the Site for future disposal.

The removal action proposed in this Action Memorandum is an interim action that will armor the banks of the Bound Brook in the area of the three culverts and along the wetlands that border the historical CDE disposal area. The objective is to eliminate direct contact with PCB-contaminated debris and prevent its migration from the banks along the perimeter of the former CDE facility property. The following actions are proposed to stabilize the banks to prevent the release of PCB-contaminated debris due to erosion:

- Vegetation will be cleared from the banks of the Bound Brook in the area of the three culverts and on the southern bank of the facility property along the edge of the wetlands area. Approximately 15,000 to 20,000 ft² of area will be cleared of vegetation.
- Geotextile fabric will be installed over the soil in the cleared area to prevent erosion. The barrier will be installed on the banks of the Bound Brook in Reach 1, from near the railway siding and three culverts to approximately 140 feet downstream of the culverts in the tongue area and north bank and for approximately 500 feet upstream of the culverts along the southern bank of the former CDE facility property that borders the wetlands area.
- Rip-rap will be installed over the geotextile fabric to armor the banks of the Bound Brook and to secure the geotextile fabric.
- A dust monitoring/control program will be initiated during all site activities. All cleared vegetation will be chipped on-site and spread on the temporary roadways.

2.2.1.2 Next Steps

- Receive 400 tons of 6-inch D-50 Rip Rap
- Receive an additional 10,000 ft² of geotextile
- Generate a plan for disposal of PPE
- Complete Administrative Record
- Clear 2,500 ft² of bank
- Install 2,500 ft² of revetment
- Remove debris from culverts
- Begin segregating brush from trees that will be run through chipper

2.2.2 Issues

ERRS field crew is capable of keeping up with installation of materials/equipment as it is currently planned to arrive. Tracking of progress will be important to ensure on-time completion and under budget.

2.3 Logistics

Crew has progressed quicker than anticipated. Additional Rip-rap deliveries have been added to the schedule and additional geotextile fabric has been ordered earlier than anticipated.

2.4 Finance

2.4.1 Narrative

2.4.2 Metrics

	Budgeted	Cost to Date
ERRS Contractor	\$355,466	\$60,000
RST	\$42,500	\$6,200
Project Ceiling	\$562,000	
Percent of Project Funds Remaining		80%

“The above accounting expenditures are an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.”

4.0 Personnel On Site

<u>Name</u>	<u>Affiliation</u>
Jim Kearns	USEPA On-Scene Coordinator
Joe Galioto	ERRS-RM
Eric Williams	ERRS-Operator
Ernest Brown	ERRS- Technician

Morris Greene
Matt Jaggard
Matt Foster

ERRS- Technician
ERRS- FCA
Weston- RST 2

5.0 Definition of Terms

ERRS- Emergency Response and Remediation Services

PCBs- Polychlorinated biphenyls

PPM- Parts per million

ROD- Record of Decision

6.0 Sources of Additional Information

6.1 Internet Location of additional information/reports

For additional information, please refer to "Documents" on www.epaossc.org/.

6.2 Reporting Schedule

The next Polrep will be submitted on 10-29-08.

7.0 Situational Reference Materials

Photo-documentation performed the week of morning of 10-13-08 to 10-17-08 is included below.



Picture 1: South-eastern corner of Site prior to grubbing (October 14, 2008)



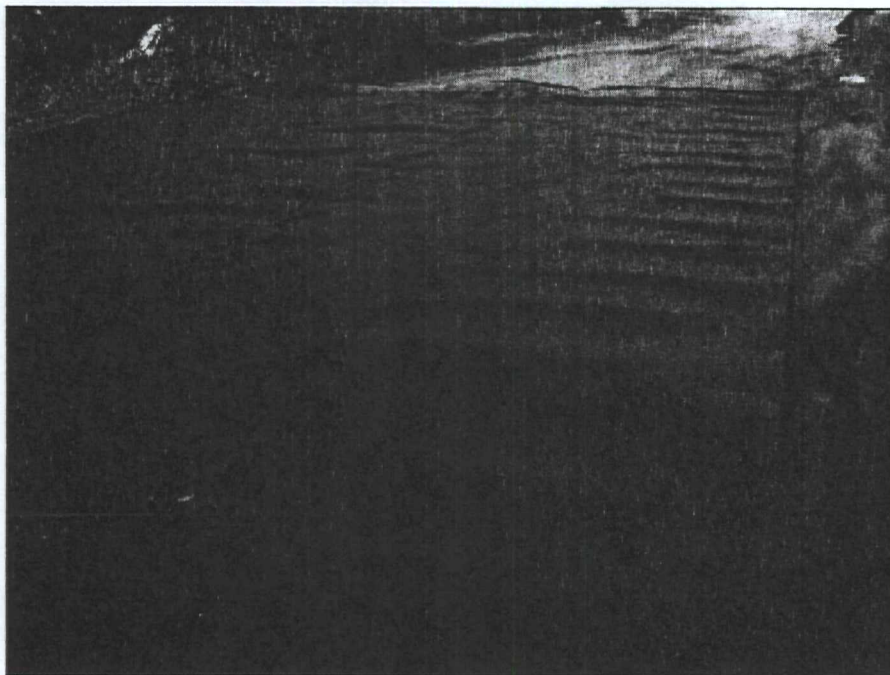
Picture 2: South-eastern corner of Site during grubbing (October 14, 2008)



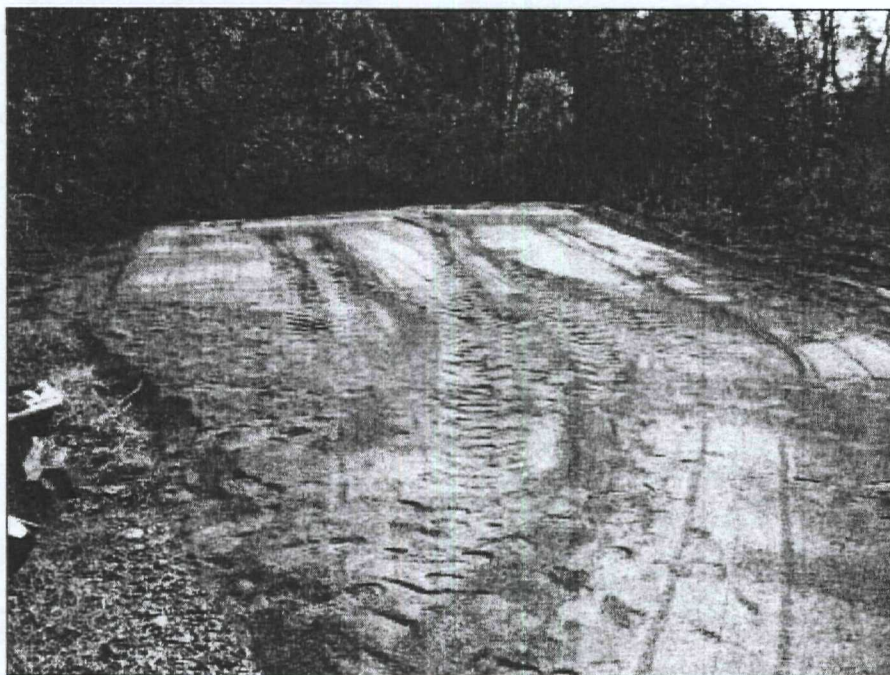
Picture 3: Slope bordering wetland at South-eastern corner of Site prior to grubbing (October 14, 2008)



Picture 4: Slope bordering wetland at South-eastern corner of Site following grubbing (October 15, 2008)



Picture 5: Poly sheeting placed over crushed stone base in Stone Staging Area (October 15, 2008)



Picture 6: Additional crushed stone placed over poly sheeting in Stone Staging Area (October 15, 2008)



Picture 7: Capacitor film uncovered near Southwest corner of Site (October 15, 2008)



Picture 8: View from west along southern boundary of Site prior to the Removal Action
(October 15, 2008)



Picture 9: Geotextile material install on bank adjacent to wetland perimeter fence
(October 15, 2008)



Picture 10: Rip-rap in staging area (October 16, 2008)